



PATENT  
COR00272P00060US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application Of:	)	HORIZONTAL COIN DISPENSER
	)	
Edward J. McGunn et al.	)	
	)	
Serial No.: 10/623,624	)	Group Art Unit: 3653
	)	
Filed: July 21, 2003	)	Examiner: Jeffrey A. Shapiro

**LETTER OF TRANSMITTAL**

Mail Stop Appeal Briefs - Patent  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Attached is Appellants' Brief on Appeal in support of the Notice of Appeal filed December 5, 2008. The fee for filing a brief in support of an appeal for a small entity is \$270.00. The filing fee of \$255.00 has previously been submitted. A check in the amount of \$15.00 is enclosed. If any additional fees are incurred as a result of the filing of this paper, authorization is given to charge Deposit Account Number 23-0785.

Respectfully submitted,

Date: February 5, 2009

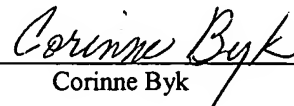
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**37 CFR 1.8  
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In re Application Of: ) HORIZONTAL COIN DISPENSER  
Edward J. McGunn et al. )  
Serial No.: 10/623,624 ) Examiner: Jeffrey A. Shapiro  
Filed: July 21, 2003 ) Art Unit: 3653

**APPELLANTS' BRIEF ON APPEAL**

Mail Stop Appeal Briefs - Patent  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

This brief is in support of the Notice of Appeal in the above filed December 5, 2008.

**REAL PARTY IN INTEREST**

The real party in interest is Corporate Safe Specialists, Inc., the assignee of the application.

Adjustment date: 02/10/2009 SSITHIB1  
06/13/2008 HUUONG1 00000008 230785 10623624  
01 FC:2402 255.00 CR

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02/10/2009 SSITHIB1 00000025 230785 10623624

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**RELATED APPEALS AND INTERFERENCES**

There are no related appeals and interferences.

**STATUS OF THE CLAIMS**

Claims 1-20 are pending in the application, are rejected, and are at issue in the appeal.

The claims are set forth in the Claims Appendix.

**STATUS OF AMENDMENTS**

No amendment was filed subsequent to the last rejection. Subsequent to filing the Notice of Appeal on December 5, 2008, one of applicant's representatives participated in an interview on January 12, 2009. No agreement was reached at the interview. The Examiner did cite three references as examples of the state of the art. These included Japan Document No. JP11-250314 and U.S. Published Applications 2004/0220859 and 2008/0078143. None of these references are relied on in any rejection. Nor would they serve the basis of any proper rejection. The third reference is not prior art to the present application.

**SUMMARY OF CLAIMED SUBJECT MATTER**

Claim1 defines a coin dispensing system 10 comprising a drawer 20 for supporting vertical tubes of currency, see page 6, line 3 and Fig. 1. Means are provided for withdrawing tubes of currency from the drawer. Particularly, the specification describes a dispenser 44 is positioned at the front of the drawer, see col. 6, lines 9-12 and Fig. 2. The

dispenser 44 comprises a semi-cylindrical housing 74 having a knob 80. The knob 80 can be turned so that the semi-cylindrical housing 74 is open to the rear to receive a tube T and can then be rotated 180° so that the tube T can be withdrawn from the dispenser 44, see page 7, lines 7-12 and Fig. 4. A sensor comprises a magnet 110 which slides along an associated row of magnetic switches 116, see page 9, lines 7 and 8, and Fig. 5. A resistor network 118, see Fig. 6, is provided for sensing position, see page 9, lines 9-16. A controller 122 senses the output from the resistor network 118, see page 11, lines 13 and 14 and Fig. 8. A control circuit in the form of the controller 122 and personal computer 22 determines quantity of currency in the drawer, see page 13, lines 20 and 21 and Figs. 8 and 9.

Claim 5 depends from claim 1 and specifies that the withdrawing means comprises a semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the housing for dispensing the vertical tube of currency. Particularly, as described in the specification, a fastener 78 secured to the bottom wall 76 is received in a slot 70 to allow for rotation of the dispenser 44 by turning a knob. The knob can be turned so that the tube T can be withdrawn from the dispenser 44. See page 7, lines 7-12 and Fig. 4.

Claim 7 defines a coin dispensing system comprising a drawer, see page 6, line 3 and Fig. 1. The drawer includes a bottom wall 30 connected to opposite side walls 32 and 34. Spaced dividers 38 define eight columns 40 for receiving vertical tubes T of currency, see page 6, lines 6-9 and Fig. 2. A plurality of dispensers 44 are provided, one for each column, see col. 6, lines 9-12 and Fig. 2. Each dispenser is for withdrawing tubes of currency from an associated column, see page 7, lines 7-12 and Fig. 4. A plurality of sensors, one for each column, comprise

magnets 110 which slides along an associated row of magnetic switches 116, see page 9, lines 7 and 8, and Fig. 5. A resistor network 118, see Fig. 6, is provided for sensing position, see page 9, lines 9-16. A controller 122 senses the output from the resistor network 118, see page 11, lines 13 and 14 and Fig. 8. A control circuit in the form of the controller 122 and personal computer 22 determines quantity of currency in the drawer, see page 13, lines 20 and 21 and Figs. 8 and 9.

Claim 16 defines a coin dispensing system comprising a drawer, see page 6, line 3 and Fig. 1. The drawer includes a bottom wall 30 connected to opposite side walls 32 and 34. Spaced dividers 38 define eight columns 40 for receiving vertical tubes T of currency, see page 6, lines 6-9 and Fig. 2. A plurality of pushing plates 46 are provided, one for each column, see page 6, lines 10-11. A spring 100 biases each pushing plate forward, see page 8, lines 4-6 and Fig. 4. A magnet 110 is on each of the pushing plates, see page 8, lines 15-17. A plurality of magnet operated switches 116 are spaced along each column to sense position of the associated magnet, see page 9, lines 7 and 8, and Fig. 5. A plurality of impedance networks 118, one for each column, are each electrically connected to the plurality of magnet operated switches 116 for the associated column so that voltage of the impedance network varies with position of the associated pushing plate, see page 9, lines 9-16. A controller 122 senses the output from the impedance network 118, see page 11, lines 13 and 14 and Fig. 8. A control circuit in the form of the controller 122 and personal computer 22 determines quantity of currency in the drawer, see page 13, lines 20 and 21 and Figs. 8 and 9.

Claim 19 depends from claim 16 and specifies the dispenser 44 for each column comprising a semi-cylindrical housing 74 for receiving a vertical tube of currency. Means are

provided for rotating the housing for dispensing the vertical tube of currency. Particularly, as described in the specification, a fastener 78 secured to a bottom wall is received in a slot 70 to allow for rotation of the dispenser 44 by turning a knob 80. See page 7, lines 7-12 and Fig. 4.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 1-20 are obvious over Valiulis et al. U.S. Patent No. 6,539,280 (hereinafter Valiulis) in view of Delbrouck U.S. Patent No. 4,269,326, further in view of Pullen U.S. Patent No. 6,220,463 and still further in view of O'Brien et al. U.S. Patent No. 6,415,953 (hereinafter O'Brien)?

**ARGUMENT**

This is the third appeal brief filed by applicant with respect to the same set of claims. The original appeal involved Jo et al. U.S. Application 2003/0141265 and Mignault U.S. Patent No. 6,269,285. Responsive to the appeal brief in the first appeal, the rejection was withdrawn and a new ground of rejection issued adding Delbrouck, Pullen and O'Brien in combination with Jo and Mignault. Responsive thereto the second appeal was filed. Again, the rejection was withdrawn and a new ground of rejection eliminating Jo and Mignault substituting Valiulis therefor. Not one of the references relied on in the various rejections has related to a coin dispensing system, described more particularly below, which determines quantity of currency in a drawer. Nor do the non-cited references.

**Claims 1-5, 7-10 and 13.**

Independent claim 1 specifies a coin dispensing system comprising a drawer for supporting vertical tubes of currency. Means are provided for withdrawing tubes of currency from the drawer. A sensor senses quantity of tubes in the drawer. A control system is operatively associated with the sensor for determining quantity of currency in the drawer.

The claimed system enables a user to efficiently store and withdraw tubes of currency, while also providing the ability to know the value of the currency in the drawer at any given time.

Independent claims 7 differs from claim 1 in specifying further details of the drawer as including a bottom wall connected to opposite side walls and a plurality of spaced dividers between the opposite side walls defining a plurality of columns for supporting vertical tubes of currency. Claim 7 also specifies a plurality of dispensers, one for each column each for withdrawing tubes of currency from an associated column. A plurality of the sensors are provided, one for each column, each for sensing quantity of tubes in the associated column. A control system is operatively associated with the sensors for determining quantity of currency in the drawer.

The action does not give weight to the reference to a coin dispensing system because it is in the preamble. However, the body of the claims recites structure relating to dispensing currency and determining quantity of currency in a drawer. The action notes that the tubes of currency specified in the claims are items worked upon and do not limit the claims. However, this ignores the fact that the body of the claim does more than simply act upon tubes of

currency. Particularly, the last listed element of each of claims 1 and 7 is a control system for determining quantity of currency in the drawer. This limitation is positively recited in the claims and cannot be ignored.

The rejection relies on a combination of four references. Not one of the four references discloses or suggests a control system operatively associated with sensors for determining quantity of currency. None are relevant to a dispensing system which determines quantity of currency in a drawer. It is error for the rejection to ignore this limitation.

None of the references, alone or in combination, relates to a coin dispensing system used with tubes of currency. The references do not disclose or suggest a drawer for supporting tubes of currency, or means for withdrawing tubes of currency from a drawer (claim 1) or a dispenser for withdrawing tubes of currency (claim 7), or a sensor for sensing quantity of tubes in the drawer. Moreover, the references do not disclose or suggest determining quantity of currency in a drawer.

Valiulis relates to a product display apparatus which aligns product packages in a linear fashion and determines the number of products present in each display apparatus. Valiulis also discloses operation with an inventory system. However, the inventory system tracks only the number of items stored on the display apparatus. This might suggest determining a quantity of tubes in the drawer, in the context of the present invention. However, it does not disclose or suggest determining quantity of currency. Nor would doing so serve any purpose. Valiulis is not directed to determining value or the like of inventory, but rather to provide an indication when a product needs to be replenished in a product display apparatus. Additionally, Valiulis does not



disclose or suggest supporting tubes of currency. Nor does Valiulis disclose or suggest a means for withdrawing any articles from the drawer, let alone tubes of currency. The action cites Delbrouck for the use of drawers or shelves and O'Brien for disclosing a means for withdrawing an article. Combining these references with Valiulis does not avoid the other deficiencies noted above.

It is not apparent why Pullen is cited. However, Pullen does not disclose the deficiencies noted above.

Valiulis, Delbrouck and O'Brien are generally related in that they involve displaying and/or dispensing of products for sale. Valiulis discloses a pusher plate for pushing the products toward one end of the display and determining the quantity of products on the display. Delbrouck discloses a similar type of arrangement in the form of a drawer. O'Brien discloses a vending machine with the front of a particular dispenser mechanism having a cylindrical dispensing cup which is rotatable. Thus, any proper combination of these references would comprise a dispensing system having a drawer for supporting vertical products, a dispensing cup for withdrawing products from the drawer and a sensor for sensing quantity of product in the drawer and a control system for determining quantity of products in the drawer. However, none of these references relate to the product being tubes of currency. More particularly, none of these references suggest determining quantity of currency in a drawer. Displaying product inventory for the purpose of replenishing inventory is not the same as determining quantity of currency in a drawer.

While the action includes the conclusory statement that “it would have been obvious to one of ordinary skill to equate a particular quantity of items, such as tubes or cylinders, each with its own monetary value, to a total of a items, and thus a total value of a items in a row since this is a common concept of inventory control”, there is no support for such a statement. Valiulis is directed to replenishing inventory. It does not discuss or have any relevance to any valuation of products. Instead, the express purpose of the system is to avoid having an empty shelf, as discussed at col. 1, lines 19-25. As such, the conclusion in the action is based solely on hindsight in view of applicant’s invention.

As is apparent, none of the four references cited in the action relate to dispensing currency. They instead at most relate to dispensing generalized articles. No combination of the references results in a control system determining quantity of currency in a drawer.

The obviousness rejection of independent claims 1 and 7, and likewise dependent claims 2-5, 8, 9, 10 and 13 is improper and ought be reversed.

**Claims 6 and 11.**

Claims 6 and 11 depend from claims 1 and 7, respectively, and specify the control system stores information representing value of currency in each vertical tube of currency and determines of quantity of currency in the drawer responsive to the sensed quantity and the stored information. There is no disclosure or suggestion of any such control system in Valiulis or the other references. As noted above, Valiulis discloses transmitting quantity information for each apparatus. This can be used with a look up table to determine whether replenishment is required,

it does not correspond to storing information representing value of currency in each vertical tube and determining quantity of currency in a drawer responsive to sensed quantity and stored information.

Claims 6 and 11 are not obvious.

**Claim 12.**

Claim 12 depends on claim 11 and specifies that the control system includes a display displaying vertical tubes of currency in each column and value of currency in each column.

None of the references discloses any display. At most, Valiulis discloses an inventory control system. However, it does not disclose what type of information is used by the inventory control system itself, other than item quantity information.

Claim 12 is not obvious.

**Claim 14.**

Claim 14 depends from claim 13 and specifies that the control system comprises a resistor network for each column electrically connected to the plurality of magnet operated switches for the associated column so that voltage of the resistor network varies with the position of the pushing plate.

None of the references disclose or suggest a resistor network. The action states that Valiulis had a sensor network that can alter an internal electrical parameter such as

resistance, referencing col. 3, lines 52-60. The action mischaracterizes what is taught by Valiulis. There is no network, let alone a resistor network. The sensor includes a conductive trace with a magnetic core material proximate the trace. The position of a pusher plate determines position of a magnetic core material relative to the trace which tunes a receiver. Admittedly, this tuning involves some resistance as there is resistance present in the trace itself. However, there is no resistor network, let alone voltage of a resistor network varying with position of the pushing plate. The tuning of the receiver relates to variation of frequency to be sensed by an RFID system. Tuning the RFID circuit is distinct from varying voltage of a resistor network as in the claims. One skilled in the art would not consider the tuning circuit of Valiulis as suggesting a resistor network as in the claim.

Claim 14 is not obvious.

**Claim 15.**

Claim 15 depends from claim 14 and specifies that the control system detects the voltage of each resistor network. As noted above, Valiulis does not disclose any voltage detection, let alone voltage detection of a resistor network. It tunes a frequency.

Claim 15 is not obvious.

**Claim 16 and 19.**

Independent claim 16 specifies a coin dispensing system comprising a drawer including a bottom wall connected to opposite side walls, and a plurality of spaced dividers

between the opposite side walls defining a plurality of columns for supporting vertical tubes of currency. The plurality of pushing plates are provided, one for each column. Biasing means bias each pushing plate forward. A magnet is provided on each of the pushing plates. A plurality of magnet operated switches are spaced along each column to sense the position of the associated magnet. A plurality of impedance networks are provided, one for each column, each electrically connected to the plurality of magnet operated switches for the associated column so that voltage of the impedance network varies with position of the associated pushing plate. A control system is operatively associated with the impedance networks for determining quantity of currency in the drawer.

As previously discussed, none of the references, alone or in any proper combination, results in a drawer defining a plurality of columns supporting tubes of currency in vertical orientation. Nor do they disclose pushing plates in each column with a magnet on each pushing plate used with magnet operated switches and an impedance network and a control system for determining quantity of currency in the drawer.

Valiulis does not disclose or suggest determining any dollar value. The quantity information can be used to determine if an item needs to be replenished. Whether or not an individual item needs to be replenished does not relate to quantity of currency in a drawer.

Even if the references were properly combined, the resultant combination would not relate to the claimed invention. The teaching or suggestion is not found in the references, but rather is based on applicant's disclosure.

The action incorrectly equates the tuning circuit in Valiulis as an impedance network. There is no basis for such a conclusion, as discussed above.

Claim 16 and dependent claim 19 are not obvious.

**Claim 17.**

Claim 17 depends from claim 16 and specifies that the control system stores information representing value of currency in each vertical tube of currency in each column and determines quantity of currency in the drawer responsive to the sensed quantity and the stored information.

There is no disclosure or suggestion of any such control system in the references. As noted above, Valiulis typically discloses transmitting item information for each rack. This can be used with a look up table to determine whether replenishment is required, it does not correspond to storing information representing value of currency in each vertical tube and determining quantity of currency in a drawer responsive to sensed quantity and stored information.

Claim 17 is not obvious.

**Claim 18.**

Claim 18 depends on claim 17 and specifies that the control system includes a display displaying quantity of vertical tubes of currency in each column and value of currency in each column.

None of the references discloses any display. At most, Valiulis discloses an inventory control system. However, it does not disclose what type of information is used by the inventory control system itself, other than stack height information.

Claim 18 is not obvious.

**Claim 20.**

Claim 20 depends from claim 16 and specifies that the impedance network comprises a resistor network.

As disclosed above, Valiulis does not disclose any impedance network. Nor does it disclose any resistance network. It discloses a tuning circuit.

Claim 20 is not obvious.

**CLAIMS APPENDIX**

1. A coin dispensing system comprising:

2 a drawer for supporting vertical tubes of currency;

means for withdrawing tubes of currency from the drawer;

4 a sensor for sensing quantity of tubes in the drawer; and

a control system operatively associated with the sensor for determining quantity of

6 currency in the drawer.

2. The coin dispensing system of claim 1 wherein the drawer comprises a

2 horizontal bottom wall connected to opposite side walls, and a plurality of spaced dividers

between the opposite side walls defining a plurality of columns for receiving vertical tubes of

4 currency.

3. The coin dispensing system of claim 2 further comprising a pushing plate

2 in each column and bias means for biasing each pushing plate toward the withdrawing means.

4. The coin dispensing system of claim 3 wherein the sensor comprises a

2 sensing element for sensing position of each pushing plate.



5. The coin dispensing system of claim 1 wherein the withdrawing means  
2 comprises a semi-cylindrical housing for receiving a vertical tube of currency and means for  
rotating the housing for dispensing the vertical tube of currency.

6. The coin dispensing system of claim 1 wherein the control system stores  
2 information representing value of currency in each vertical tube of currency and determines  
quantity of currency in the drawer responsive to the sensed quantity and the stored information.

7. A coin dispensing system comprising:

2 a drawer including a bottom wall connected to opposite side walls, and a plurality  
of spaced dividers between the opposite side walls defining a plurality of columns for supporting  
4 vertical tubes of currency;

a plurality of dispensers, one for each column, each for withdrawing tubes of  
6 currency from an associated column;

a plurality of sensors, one for each column, each for sensing quantity of tubes in  
8 the associated column; and

a control system operatively associated with the sensors for determining quantity  
10 of currency in the drawer.

8. The coin dispensing system of claim 7 further comprising a plurality of  
2 pushing plates, one for each column, and bias means for biasing each pushing plate toward an  
associated dispenser.

9. The coin dispensing system of claim 8 wherein each sensor comprises a  
2 sensing element for sensing position of each pushing plate.

10. The coin dispensing system of claim 7 wherein each dispenser comprises a  
2 semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the  
housing for dispensing the vertical tube of currency.

11. The coin dispensing system of claim 7 wherein the control system stores  
2 information representing value of currency in each vertical tube of currency in each column and  
determines quantity of currency in the drawer responsive to the sensed quantity and the stored  
4 information.

12. The coin dispensing system of claim 11 wherein the control system  
2 includes a display displaying quantity of vertical tubes of currency in each column and value of  
currency in each column.

13. The coin dispensing system of claim 7 wherein further comprising a  
2 plurality of biased pushing plates, one for each column, and each sensor comprises a magnet on  
one of the pushing plates and a plurality of magnet operated switches spaced along the associate  
4 column to sense position of the pushing plate.

14. The coin dispensing system of claim 13 wherein the control system  
2 comprises a resistor network for each column electrically connected to the plurality of magnet  
operated switches for the associated column so that voltage of the resistor network varies with  
4 position of the pushing plate.

15. The coin dispensing system of claim 14 wherein the control system detects  
2 the voltage for each resistor network.

16. A coin dispensing system comprising:

2 a drawer including a bottom wall connected to opposite side walls, and a plurality  
of spaced dividers between the opposite side walls defining a plurality of columns for supporting  
4 vertical tubes of currency;

a plurality of pushing plates, one for each column, and biasing means for biasing  
6 each pushing plate forward;

a magnet on each of the pushing plates;

8 a plurality of magnet operated switches spaced along each column to sense  
position of the associated magnet;

10 a plurality of impedance networks, one for each column, each electrically  
connected to the plurality of magnet operated switches for the associated column so that voltage  
12 of the impedance network varies with position of the associated pushing plate; and

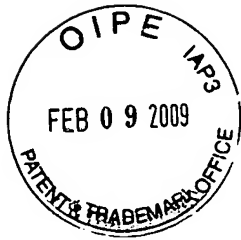
a control system operatively associated with the impedance networks for  
14 determining quantity of currency in the drawer.

17. The coin dispensing system of claim 16 wherein the control system stores  
2 information representing value of currency in each vertical tube of currency in each column and  
determines quantity of currency in the drawer responsive to the sensed quantity and the stored  
4 information.

18. The coin dispensing system of claim 17 wherein the control system  
2 includes a display displaying quantity of vertical tubes of currency in each column and value of  
currency in each column.

19. The coin dispensing system of claim 16 further comprising a dispenser for  
2 each column comprising a semi-cylindrical housing for receiving a vertical tube of currency and  
means for rotating the housing for dispensing the vertical tube of currency.

20. The coin dispensing system of claim 16 wherein the impedance network  
2 comprises a resistor network.



**EVIDENCE APPENDIX**

There is no evidence relied on.

**RELATED PROCEEDINGS APPENDIX**

There are no related proceedings.

**SUMMARY**

None of the cited references even consider determining quantity of currency in a drawer as none of the references relate to a coin dispensing system. The fact that not a single reference is cited relating to a coin dispensing system which supports vertical tubes of currency and determines quantity of currency in a drawer, is indicative of the fact that the claimed invention is unique and is not obvious.

Reconsideration of the application and reversal of the rejections is requested.

Respectfully submitted,

Dated: February 5, 2009

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